

**Press Release**  
**25<sup>th</sup> May 2023**  
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## **The world's most sustainable protein Solein® unveiled in Singapore, marking the first taste of the future**

*With the Singapore event, Solar Foods officially brings the novel protein for people to taste for the first time. The occasion marks the world premiere of proteins grown out of thin air and sees the dawn of the future of food.*

The world's most sustainable protein Solein has its first official tasting today, May 25th, in Singapore for invited guests from the food industry, investors, and journalists.

The tasting is a huge milestone for Solein's developers, the Finnish food tech company Solar Foods. Solein received its first novel food regulatory approval in Singapore in September 2022. At the time, Solar Foods CEO and partner **Pasi Vainikka** compared the moment to when the Spanish first encountered the humble potato in the 16<sup>th</sup> century in South America.

"This is the first time in history humankind can be provided with edible calories that at no point require photosynthesis. So far photosynthetic plants have been the only feasible way to receive energy from the sun to feed humankind. Now, this process can be by-passed in its entirety. That's an absolutely historic moment. A new era begins in the primary production of food and restoring biodiversity", Vainikka says.

### **Impacting sustainability, food industry and familiar dishes**

Solein is the most sustainable protein in the world. It is grown not from soil but with CO<sub>2</sub> and electricity in a bioprocess that is a truly unique farm-free way of growing an all-purpose ingredient capable of replacing animal- or plant-based protein. Solein holds the most potential of any new food to revolutionise food production and free the planet from industrial agriculture.

The Solar Foods team has worked hard and diligently on ensuring that Solein is not only sustainable, but also a highly functional, nutritious, and versatile ingredient. Solein can replace meat or plant proteins in everyday foods as it can be used as a structure-forming and nutritional ingredient that doesn't disrupt the tastes of familiar foods.

Taste is an integral component for any ingredient. Solein has a delicately unique flavour with a pleasant note of umami. It blends into foods enriching the original flavours.

"Food is a very personal thing: we are attached to our favourite foods and their tastes. We want Solein to let those familiar tastes shine, not take their place. The future can taste like anything we want it to taste", Vainikka envisions.

## A historical menu for a new era

For the first tasting in Singapore Solar Foods collaborated with one of Singapore's most prestigious hospitality companies, The Lo & Behold Group. They own and operate some of the city's most beloved restaurants, bars, clubs and hotels. The tasting event is held in the Group's most recently launched restaurant Fico.

The menu for the tasting was created with **Oliver Truesdale Jutras** as the leading chef. Truesdale Jutras is widely regarded as a thought leader focused on the future of food, having been a founding member of Singapore's F&B Sustainability Council and its current Chair. His new consultancy with The Lo & Behold Group sees Chef Oliver teaming up with Michelin-starred Chef **Mirko Febbrile** to create a full tasting menu using Solein.

The team was given full freedom to use the novel ingredient for creating the menu. They got to discover cooking methods for Solein and use their creativity to come up with dishes that in their mind embody what the future might taste like. The menu offers a look into the versatility and functionality of Solein: when Michelin-starred chefs find ways to make the most of it, it is a strong signal that the ingredient can also work well with everyday food products.

The final menu gives a glimpse into a future where tastes are familiar, but the path that food crosses to arrive on our plate might be something entirely different from today.

"We cooked with Solein and a lot of local ingredients. It was exciting because we got to play with flavours really familiar to Singaporean cuisine, but at the same time experiment and introduce Solein as something that's entirely new and wild and never seen before anywhere", chef Oliver describes.

"I'm personally fascinated by the breadth of Solein. It alleviates the challenges of traditional agriculture as it can be used in everyday foods and even all the way into the kind of elevated Italian cuisine that we serve at Fico. It could even help with nourishment needs in disaster-stricken areas. Not many ingredients can bridge this gap."

The first commercial-scale production facility of Solein, Factory 01, will open in 2024 in Finland and begin producing the novel protein for the needs of the food industry. With expanded capacity, Solar Foods expects the production cost of Solein to also drop significantly. Singapore will see more Solein in the near future.

## What is Solein?

- Solein is a microbial protein-rich powder that contains all the essential amino acids. It can be used to replace existing proteins in a variety of foods, for example in alternative dairy and meat, different snacks and beverages, noodles and pasta, or breads and spreads. It is the first ever novel food disconnected from the limits of traditional agriculture. This type of production method has the potential to transform the sustainability, availability and transparency of what we eat and where food can be produced.
- Solein is produced using a bioprocess where microbes are fed with gases (carbon dioxide, hydrogen, and oxygen) and small amounts of nutrients. The bioprocess resembles winemaking, with carbon dioxide and hydrogen replacing sugar as the source of carbon and energy, respectively.
- Solein is 65-70% protein, 5-8% fat, 10-15% dietary fibres and 3-5% mineral nutrients. The macronutrient composition of Solein cells is very similar to that of dried soy or algae. Solein provides iron and B vitamins and is exceptionally functional. Solein can be used with a wide

variety of other ingredients: it vanishes into foods and doesn't change the taste of familiar, everyday food products.

- The production of Solein is not reliant on agriculture, weather, or climate: it can be produced in harsh conditions such as deserts, Arctic areas, even space. The process does not require animals or photosynthetic plants, making Solein the world's most sustainable protein.
- Solein will become available for commercial use for the first time. It is aimed at food brands looking for nutritious, functional, and sustainable protein ingredients of consistent quality that can be reliably delivered for their products. Singapore was the first market to grant Solein a regulatory approval, but Solar Foods is also seeking authorisations in other markets across the world.
- Factory 01 is Solar Foods' first commercial production facility and will begin to produce Solein in 2024. Construction of the facility started in Vantaa, Finland during Q4 2021. Factory 01 will scale Solein production to a level where it can be brought to market for the first time. Solar Foods has plans to expand its network of production facilities in the coming years.

Learn more about Solein at [www.solein.com](http://www.solein.com)

For media materials, please visit [www.solarfoods.com/media/Singapore](http://www.solarfoods.com/media/Singapore)

Chefs Oliver and Mirko experiment and cook with Solein and discuss their thoughts on the novel protein and its possibilities: [watch the full video on YouTube](#)

#### **For more information and requests for interviews:**

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#### **Solar Foods Ltd.**

Solar Foods produces protein using carbon dioxide and electricity. Solein production, independent of weather and climate conditions, liberates global protein production from the constraints of traditional agriculture. Solar Foods was founded in Espoo, Finland, in 2017 by Dr Pasi Vainikka, Dr Juha-Pekka Pitkänen, Sami Holmström, Jari Tuovinen, Professor Jero Ahola, and Janne Mäkelä as a spinoff from VTT Technical Research Centre of Finland and LUT University. [www.solarfoods.com](http://www.solarfoods.com)



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